

FIG. 2

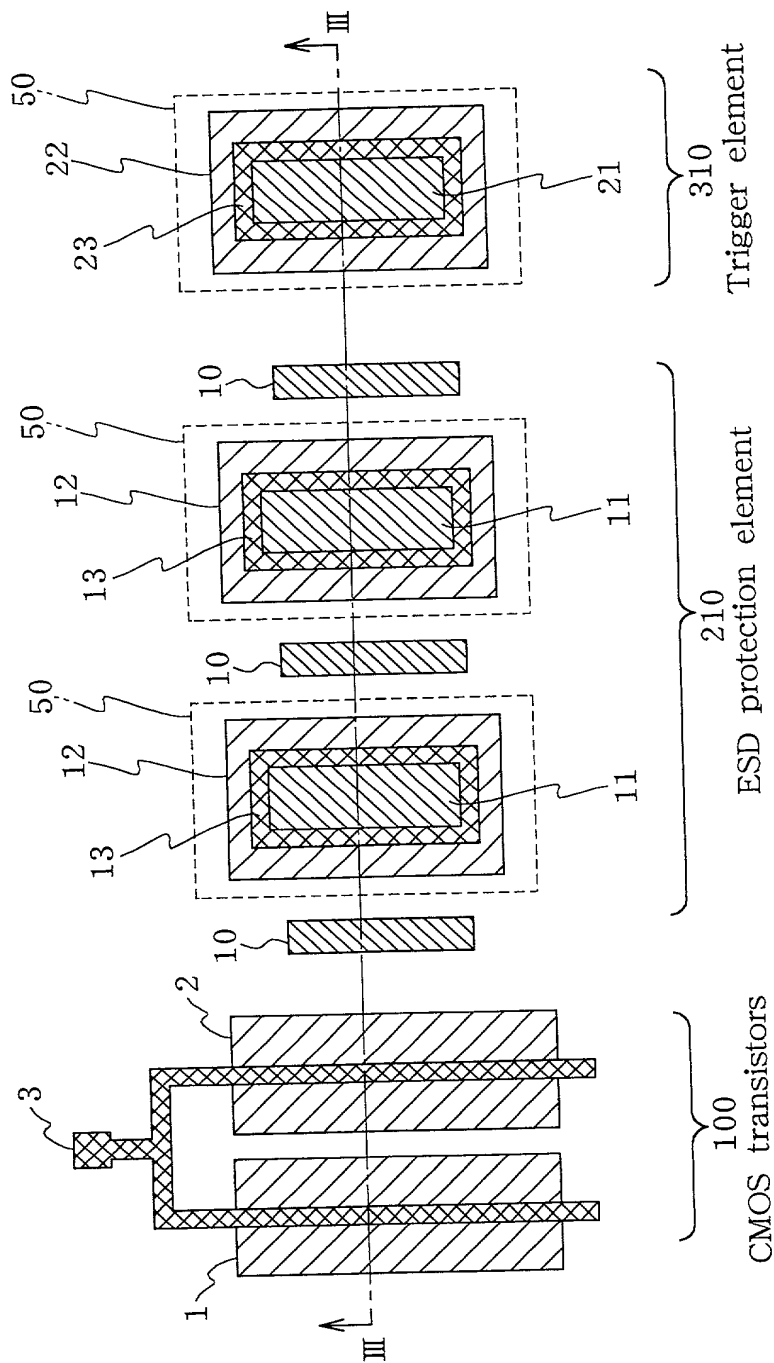


FIG. 3

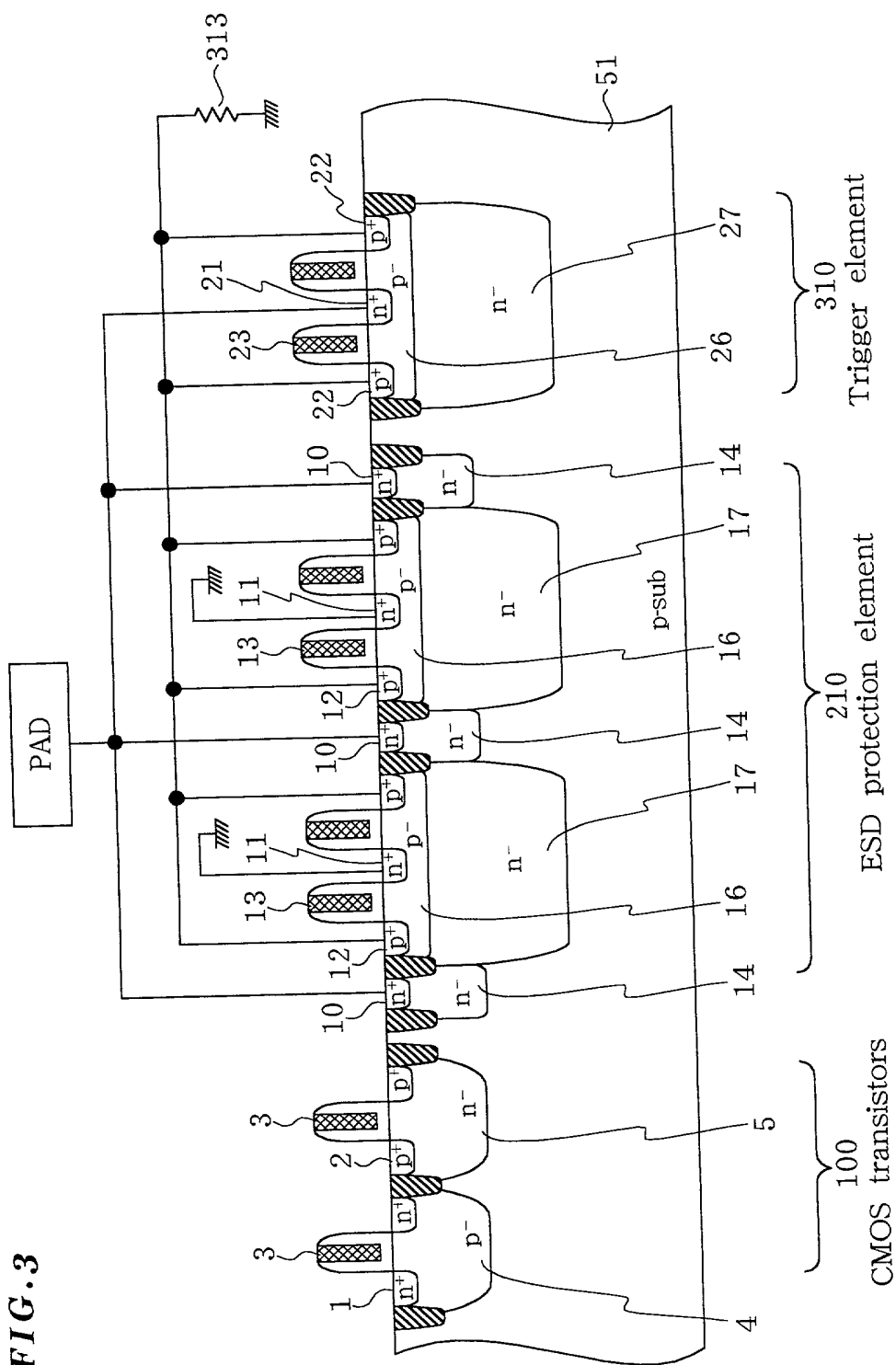


FIG. 4

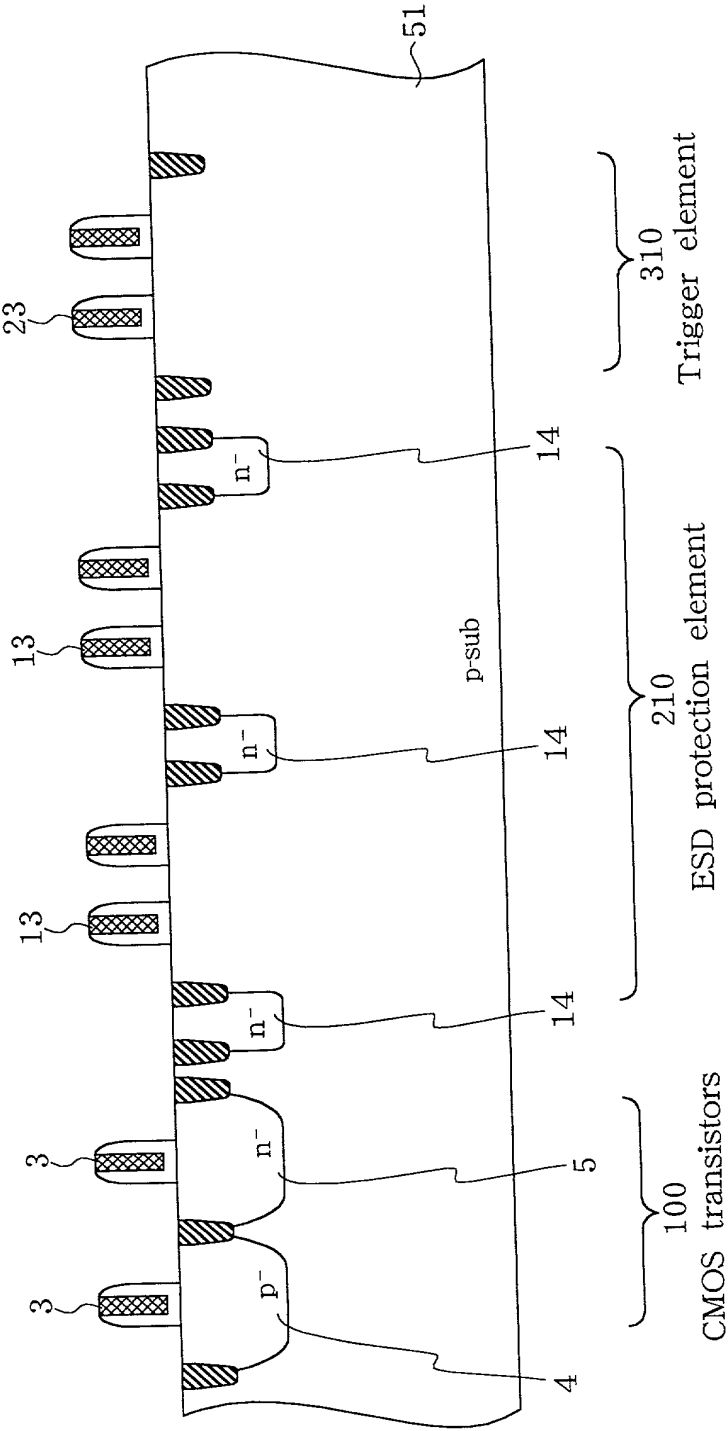


FIG. 5

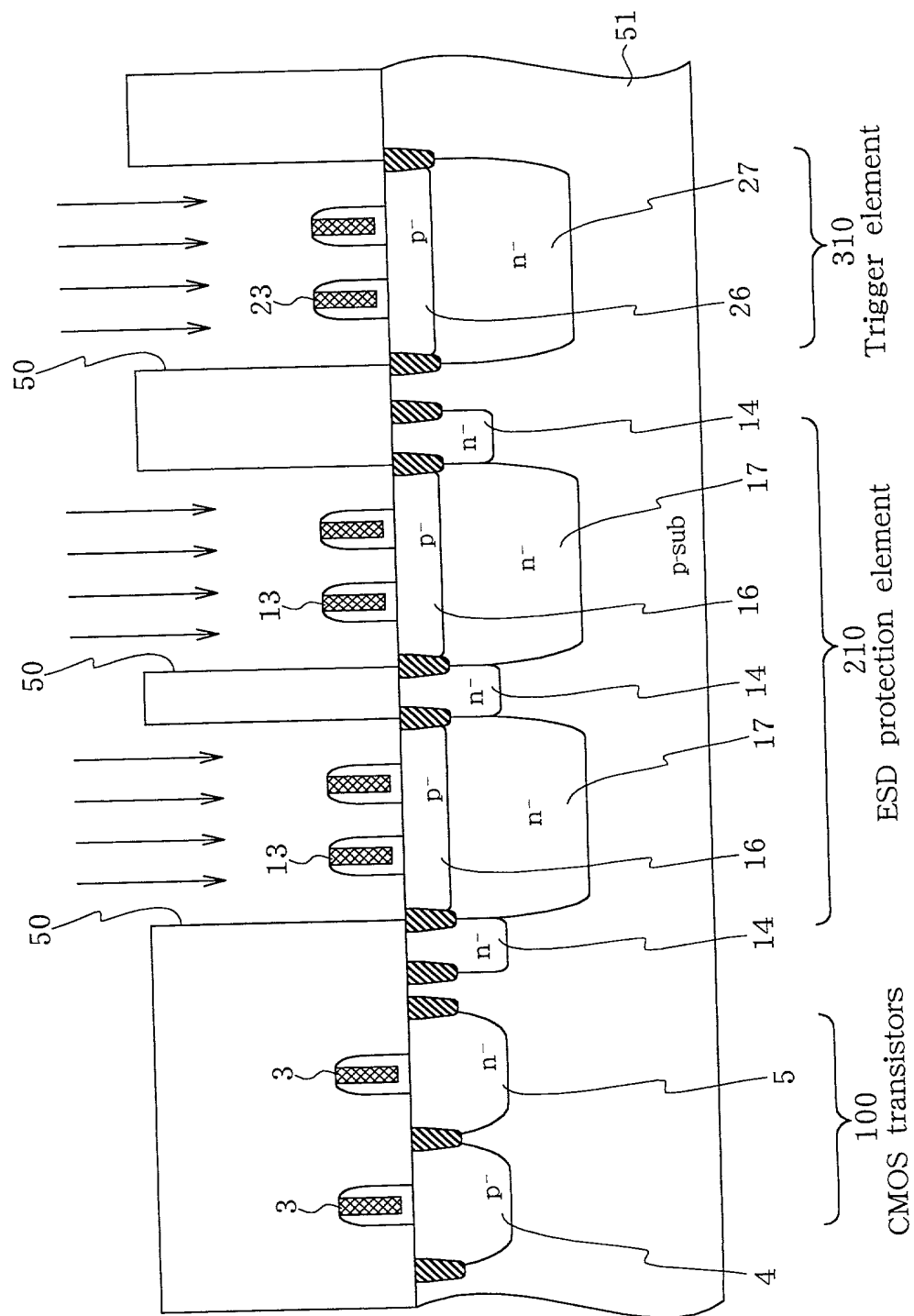


FIG. 6

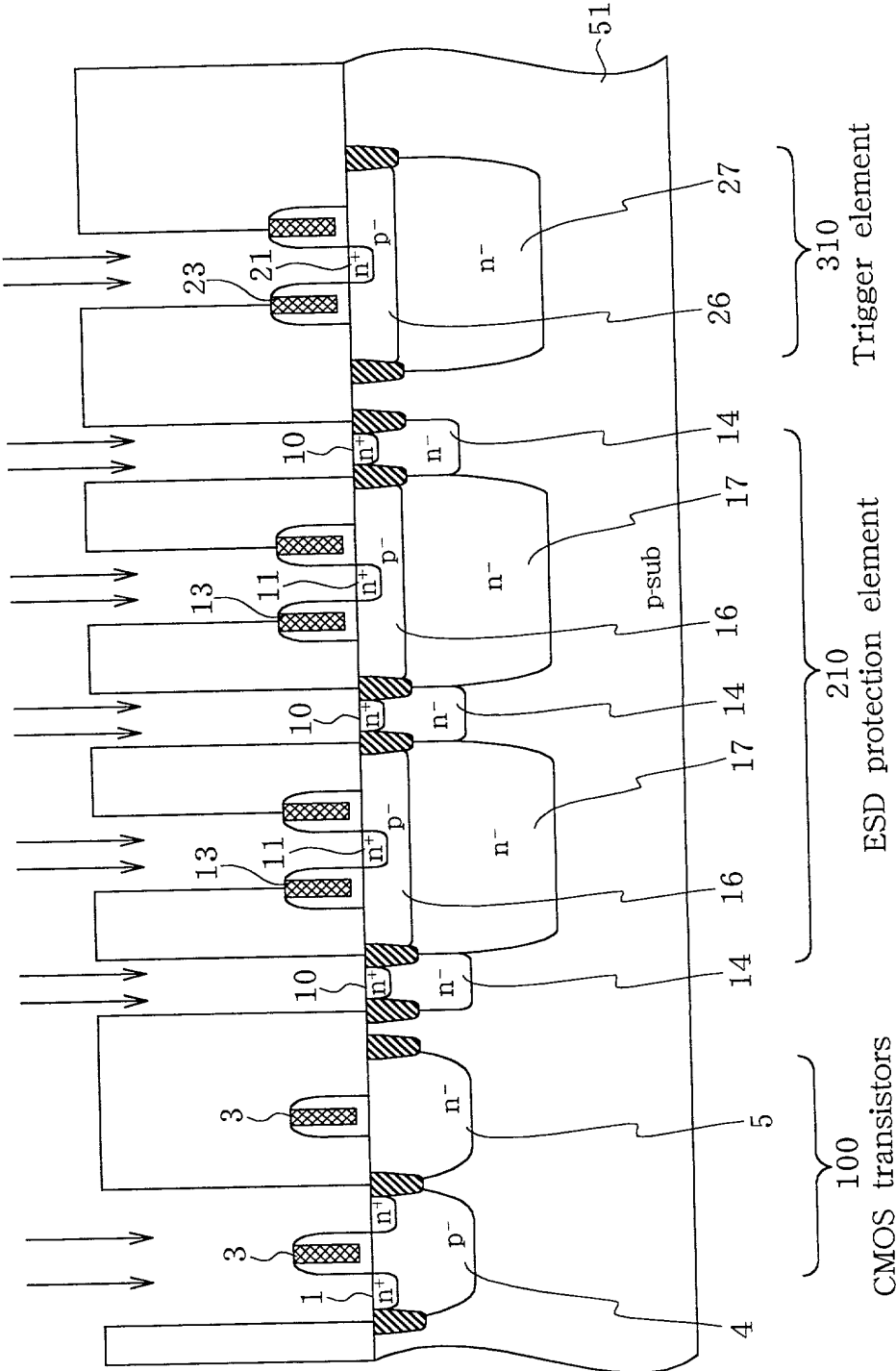


FIG. 7

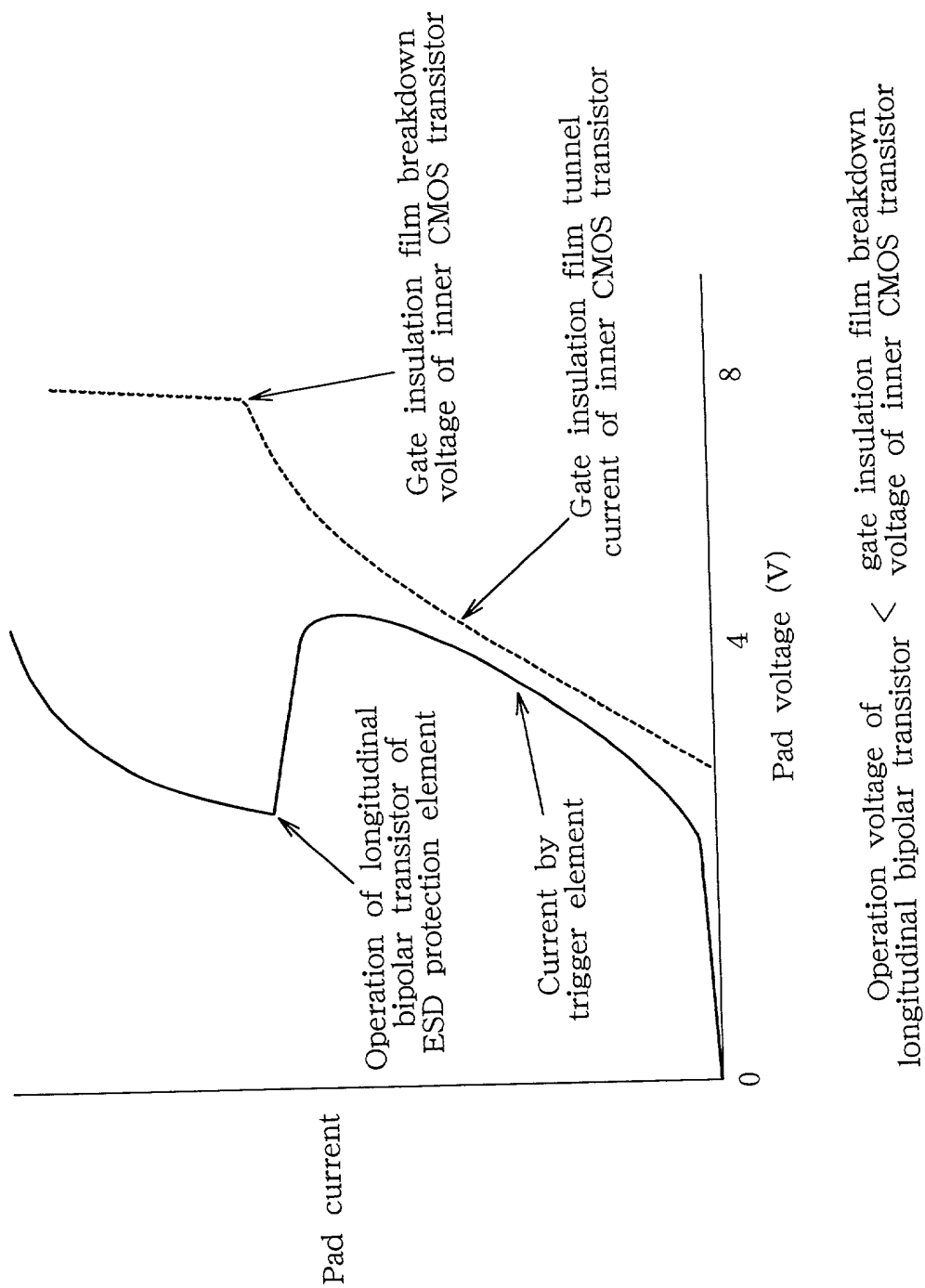


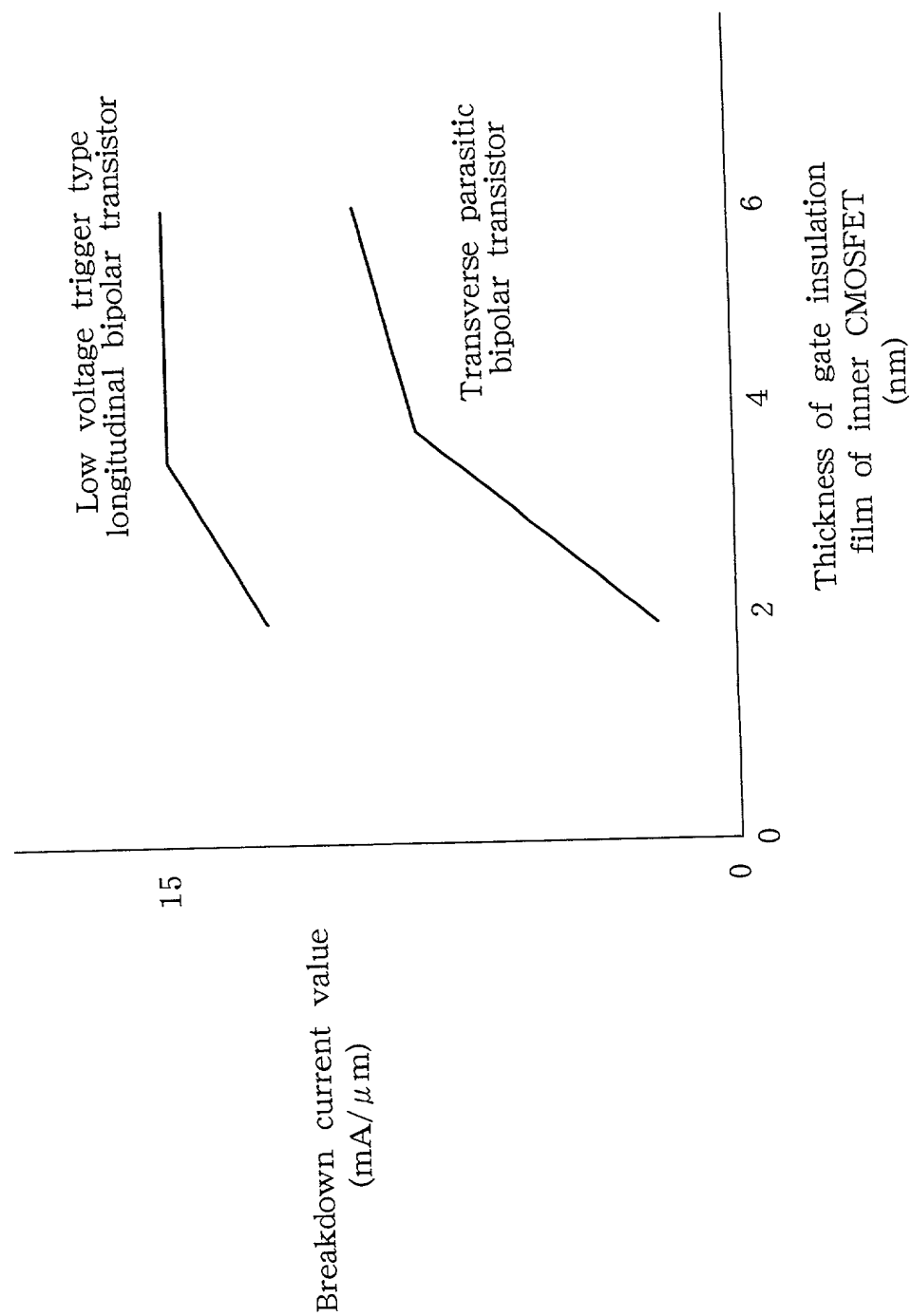
FIG. 8

FIG. 9

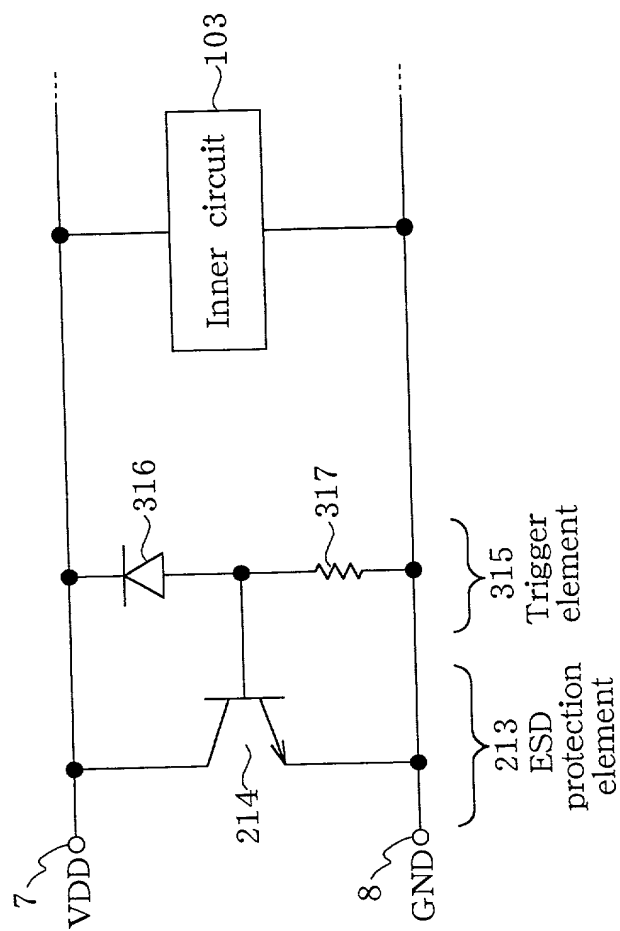


FIG. 10

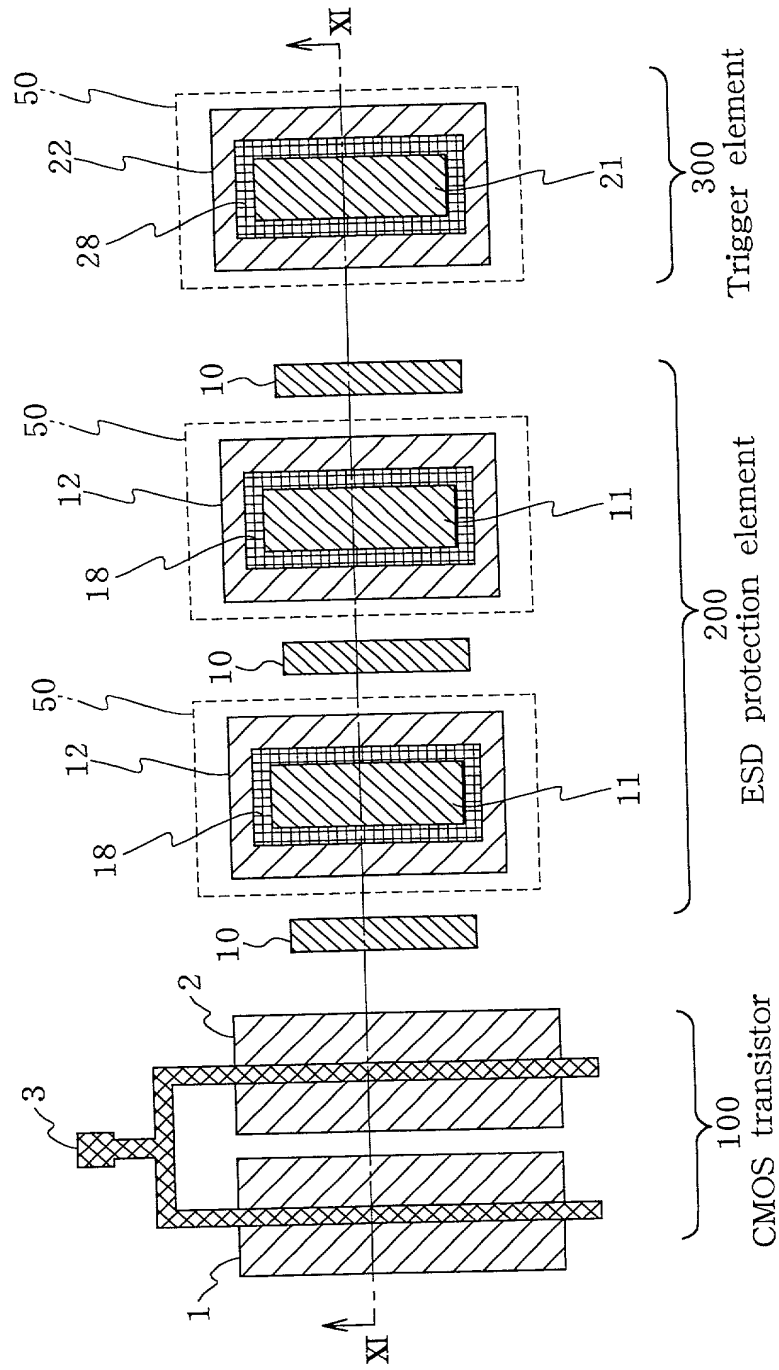


FIG. 11

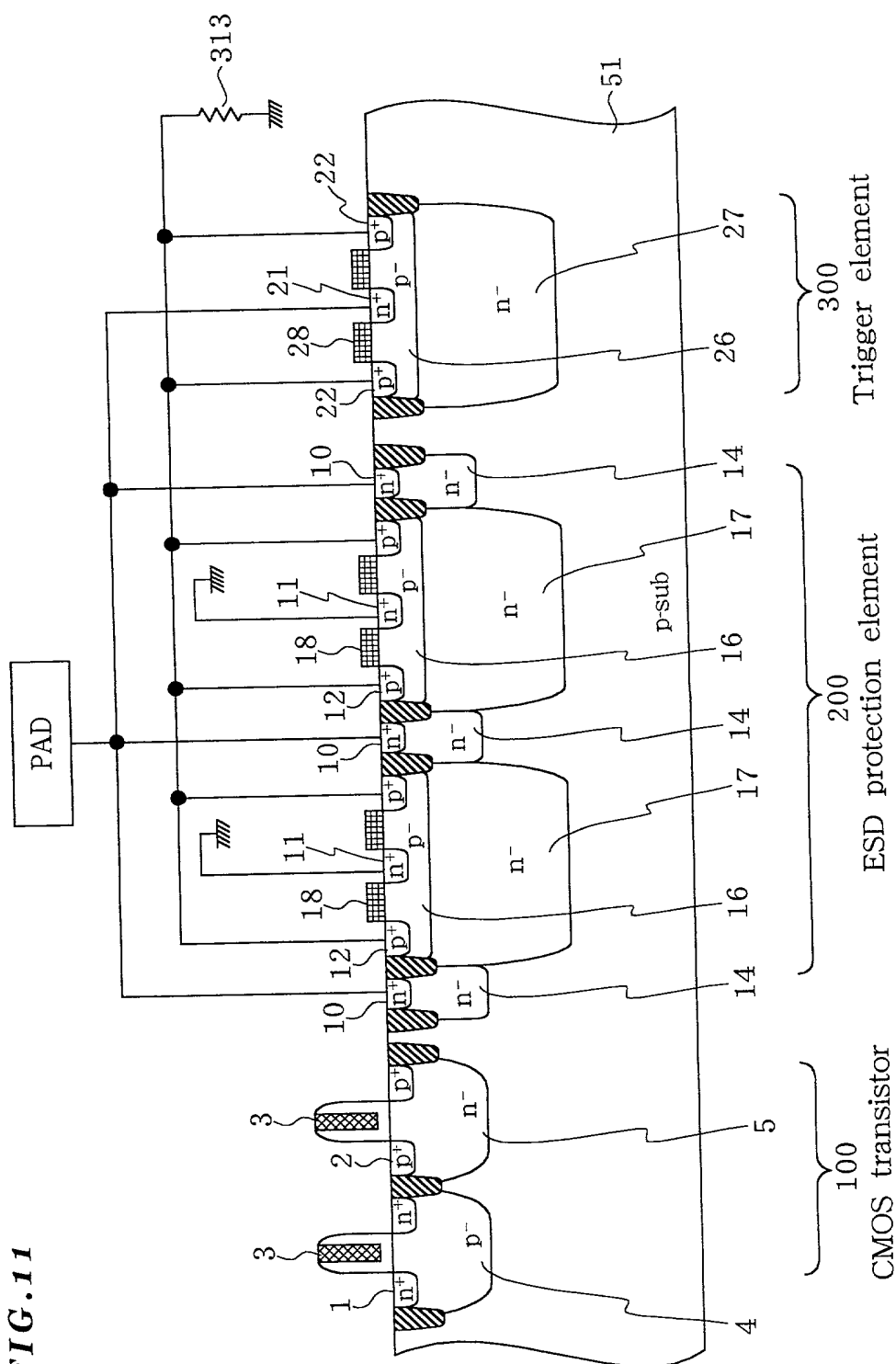


FIG. 12

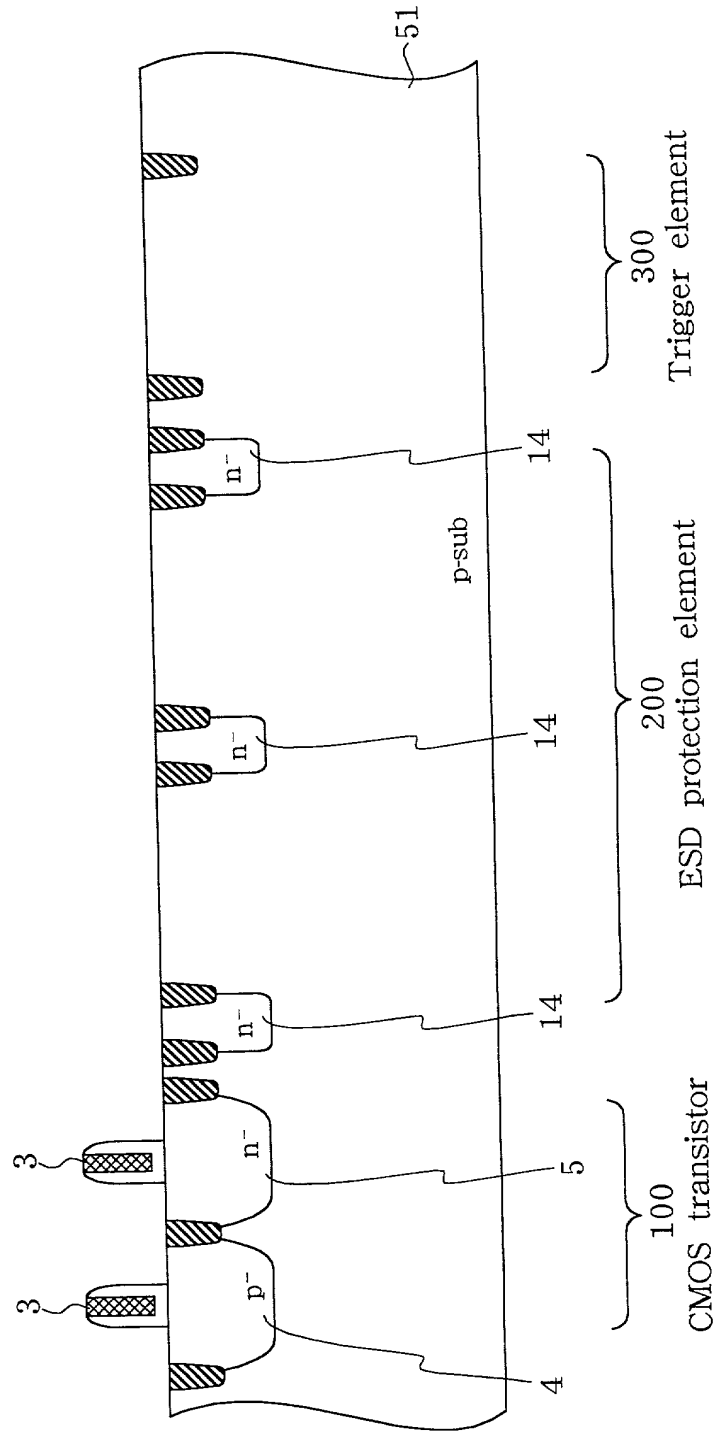


FIG. 13

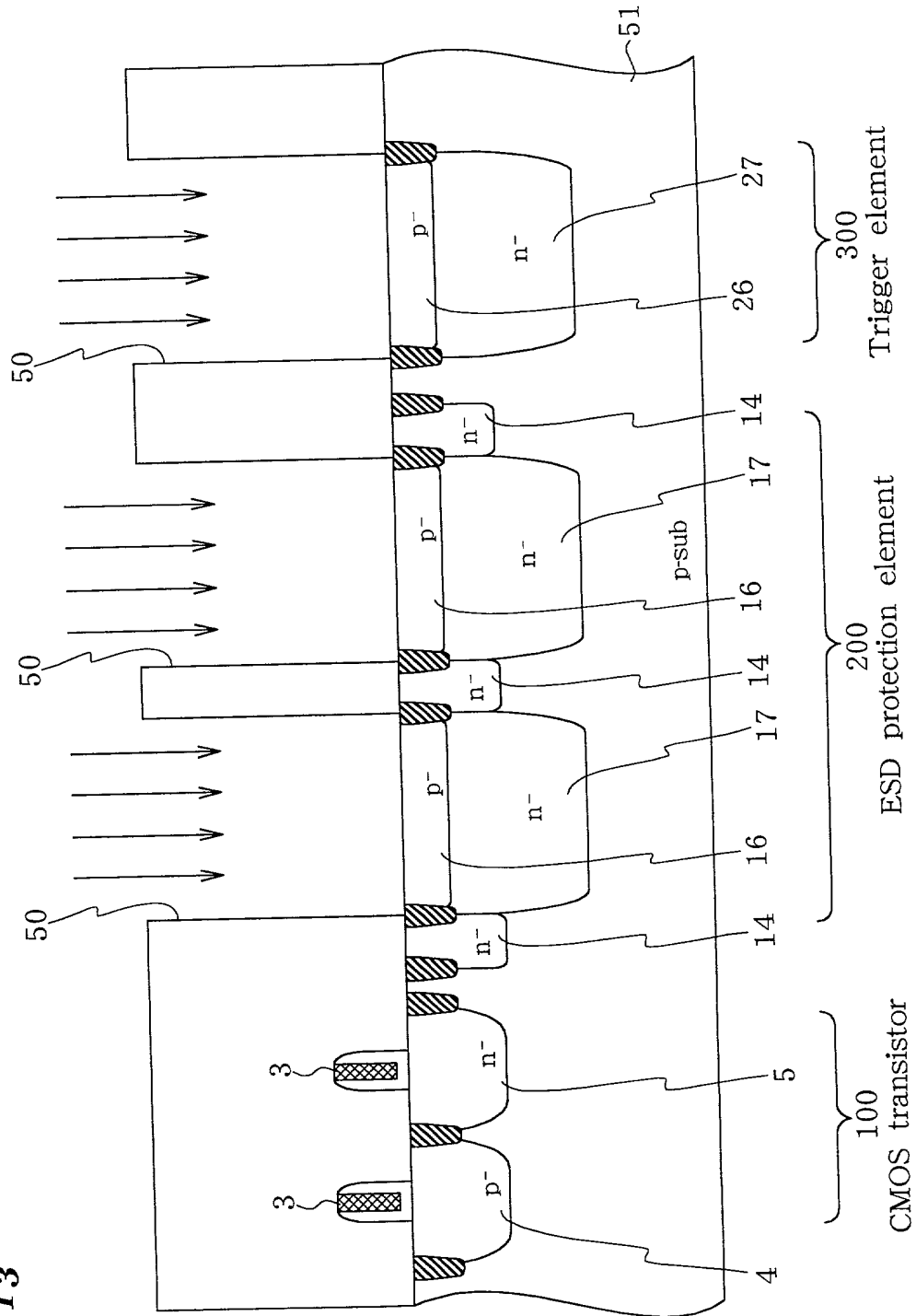


FIG. 14

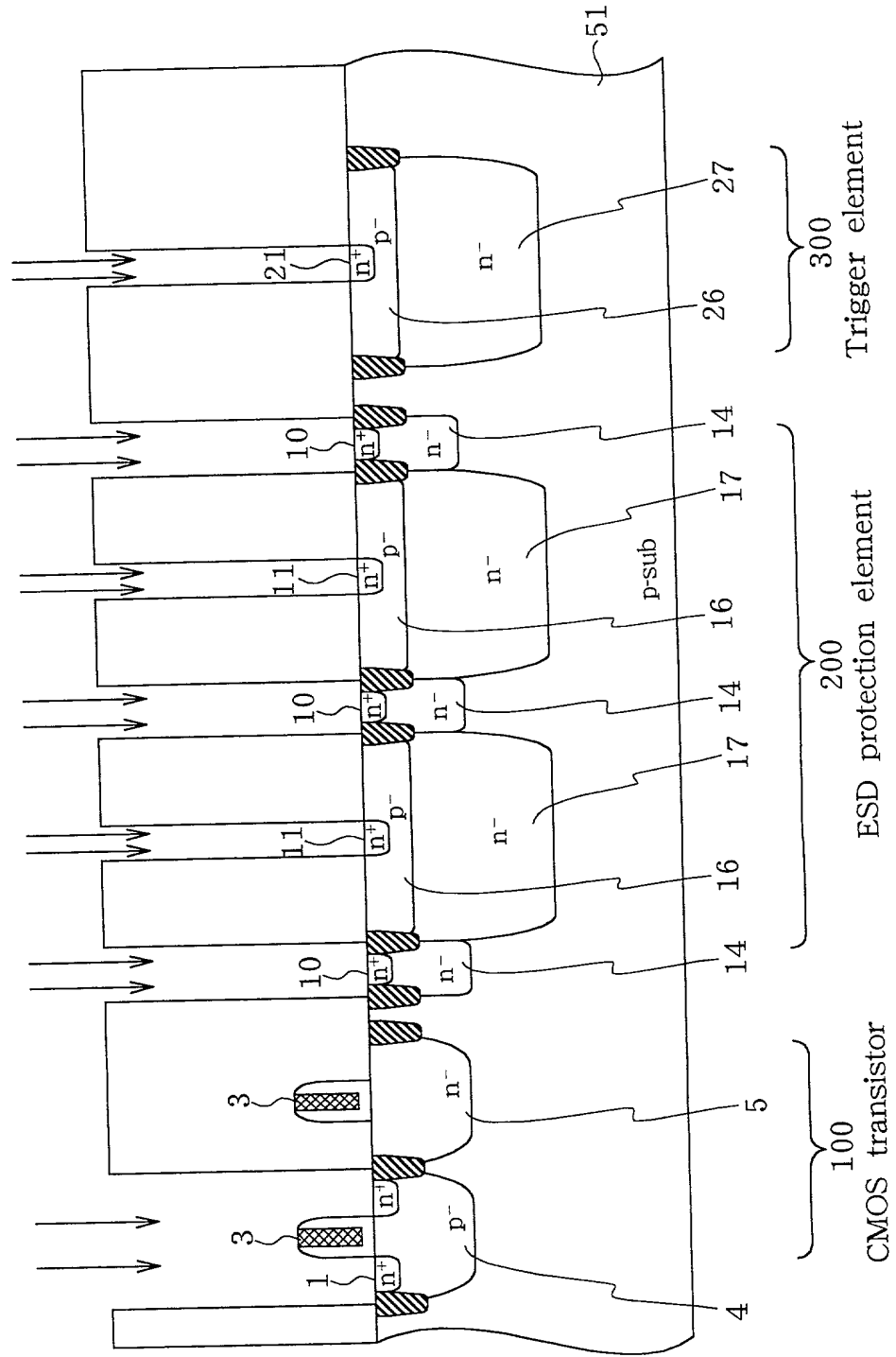


FIG. 15

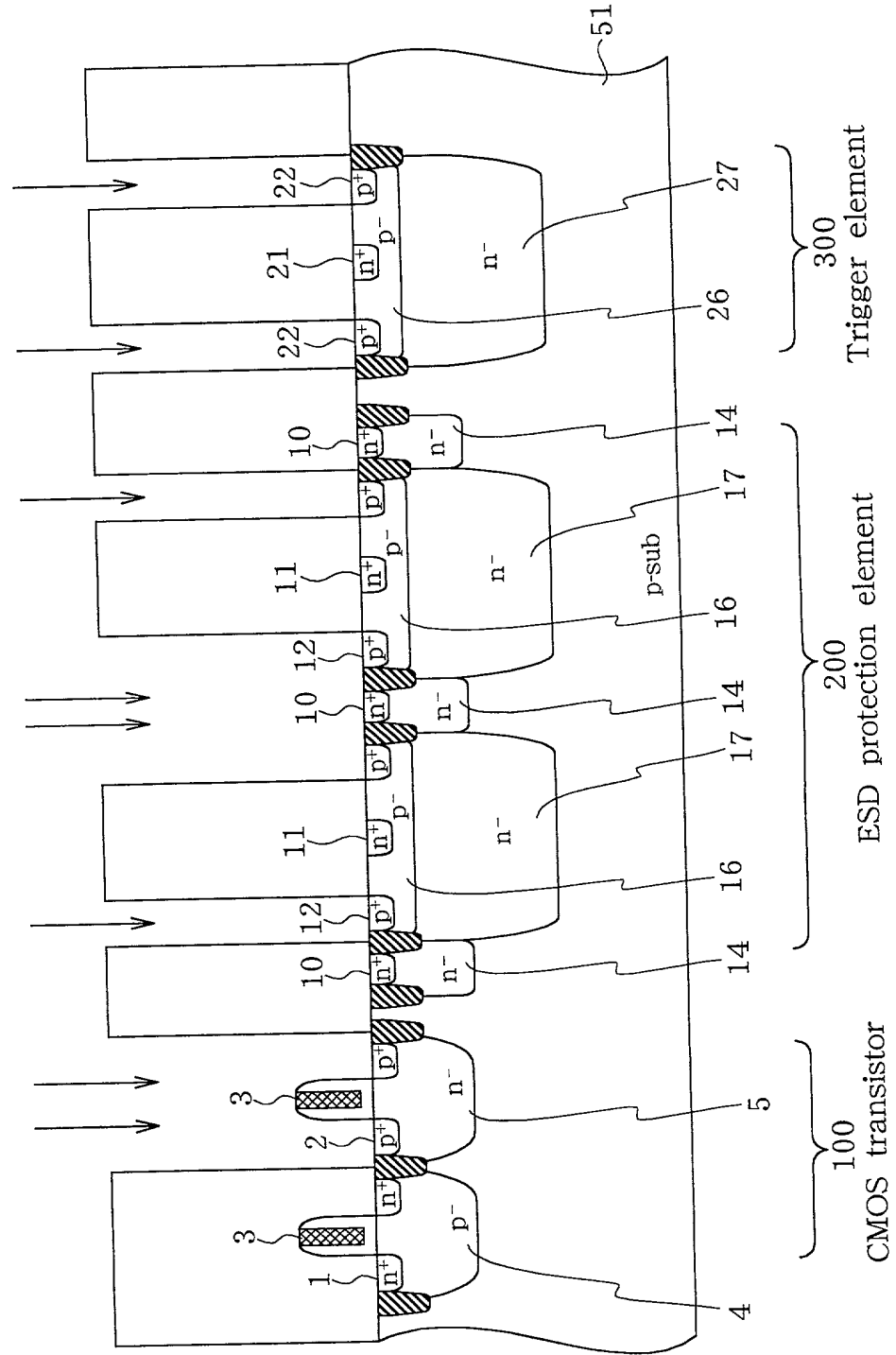


FIG. 16

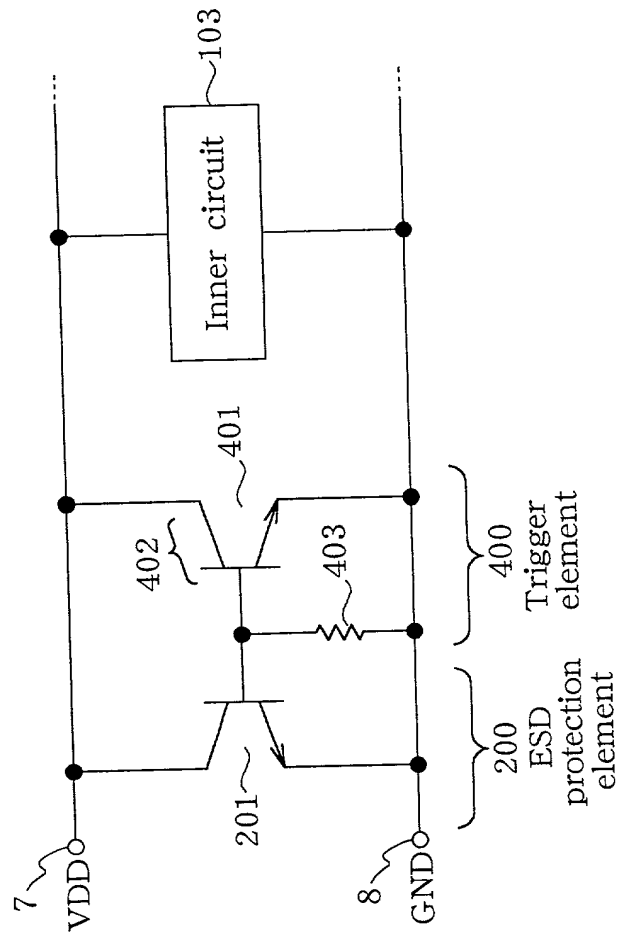


FIG. 17

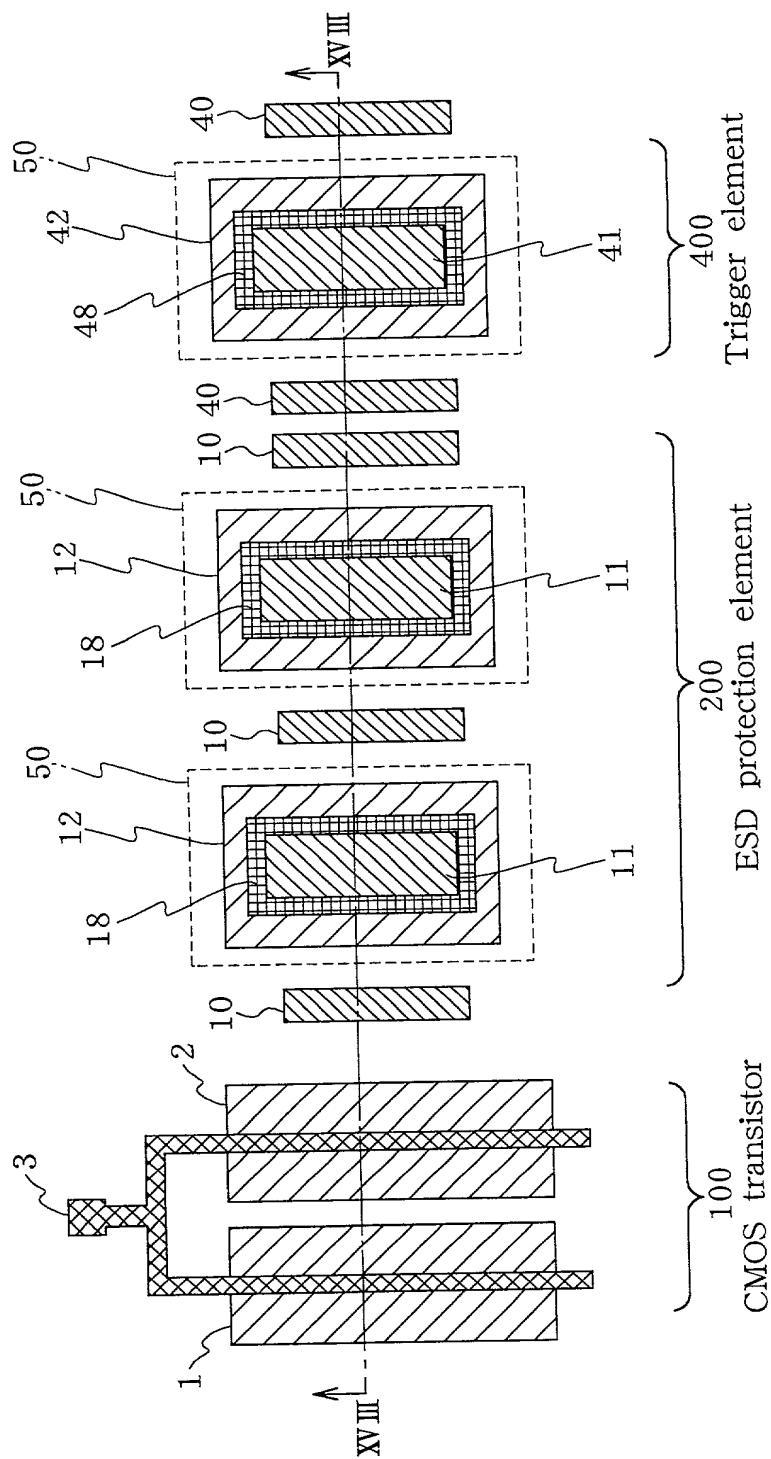


FIG. 18

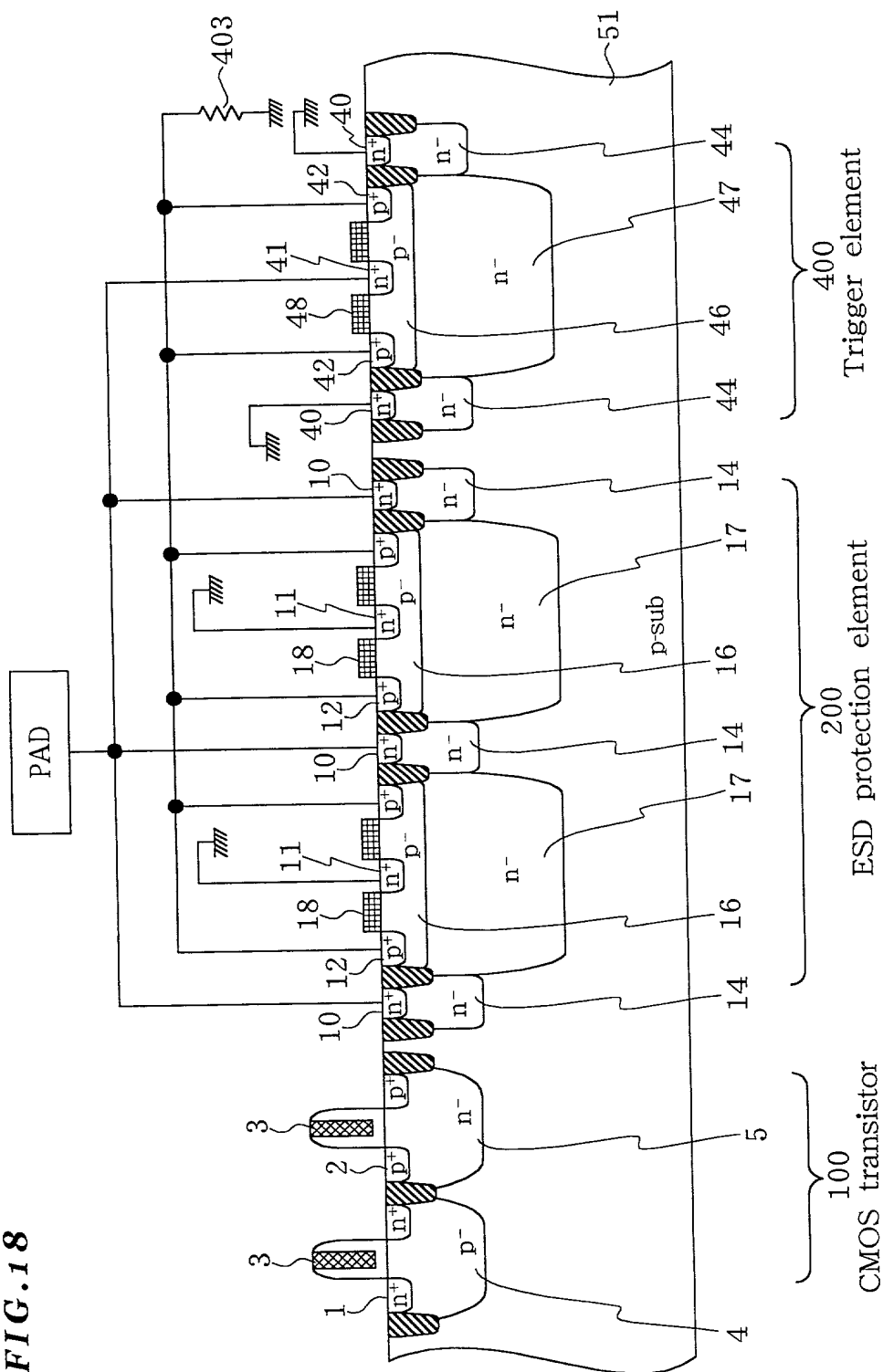
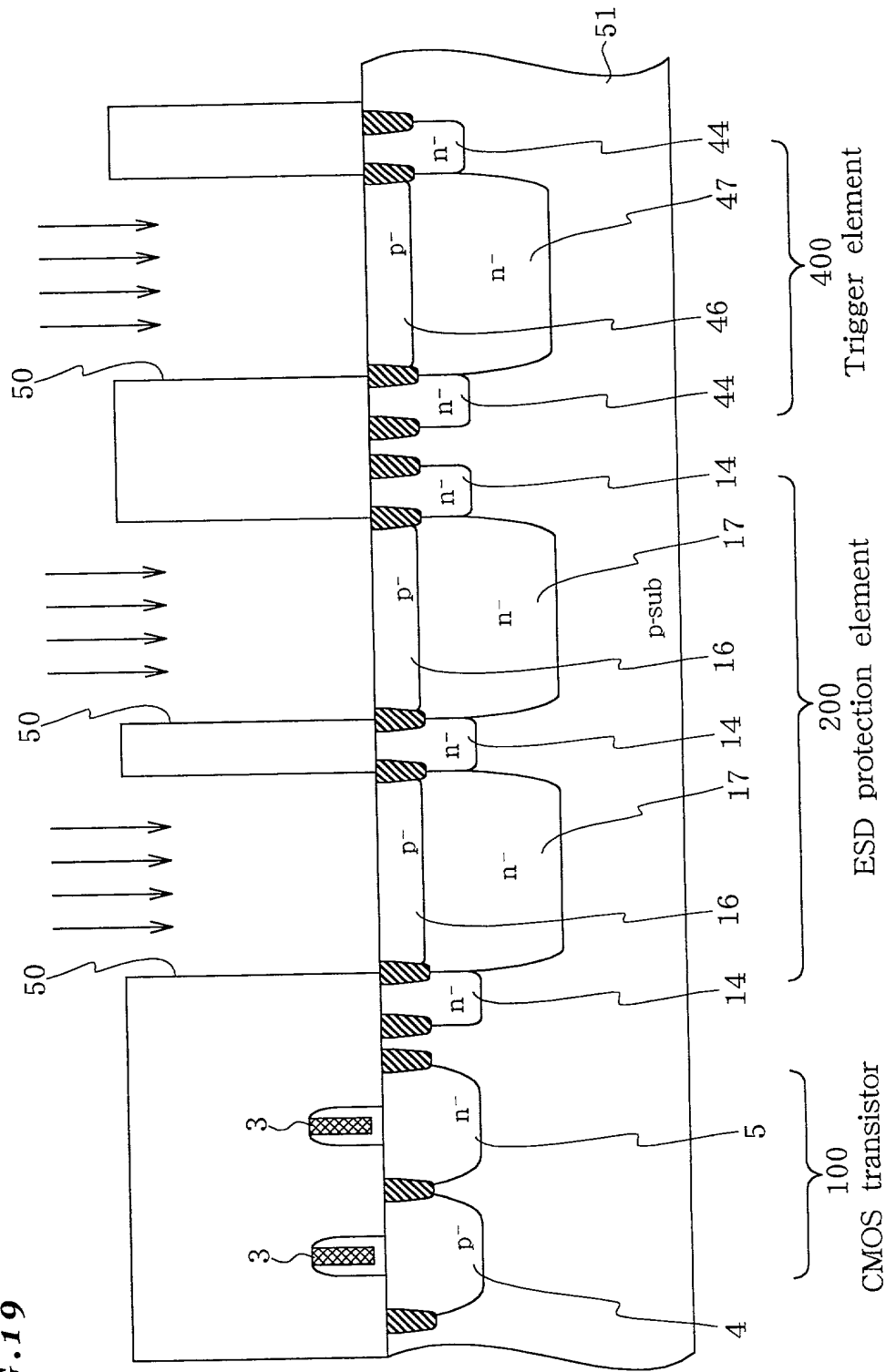


FIG. 19



Parameter	Value	Unit	Source
Age	1.2	yr	1
Weight	70	kg	1
Height	1.75	m	1
Sex	Male		1
Activity level	1.2		1
Energy intake	2500	kcal/day	1
Energy expenditure	2500	kcal/day	1
Energy balance	0	kcal/day	1
Weight change	0	kg	1
Height change	0	m	1
Sex change	0		1
Activity level change	0		1
Energy intake change	0	kcal/day	1
Energy expenditure change	0	kcal/day	1
Energy balance change	0	kcal/day	1
Weight change rate	0	kg/yr	1
Height change rate	0	m/yr	1
Sex change rate	0		1
Activity level change rate	0		1
Energy intake change rate	0	kcal/day/yr	1
Energy expenditure change rate	0	kcal/day/yr	1
Energy balance change rate	0	kcal/day/yr	1
Weight change rate rate	0	kg/yr/yr	1
Height change rate rate	0	m/yr/yr	1
Sex change rate rate	0		1
Activity level change rate rate	0		1
Energy intake change rate rate	0	kcal/day/yr/yr	1
Energy expenditure change rate rate	0	kcal/day/yr/yr	1
Energy balance change rate rate	0	kcal/day/yr/yr	1
Weight change rate rate rate	0	kg/yr/yr/yr	1
Height change rate rate rate	0	m/yr/yr/yr	1
Sex change rate rate rate	0		1
Activity level change rate rate rate	0		1
Energy intake change rate rate rate	0	kcal/day/yr/yr/yr	1
Energy expenditure change rate rate rate	0	kcal/day/yr/yr/yr	1
Energy balance change rate rate rate	0	kcal/day/yr/yr/yr	1
Weight change rate rate rate rate	0	kg/yr/yr/yr/yr	1
Height change rate rate rate rate	0	m/yr/yr/yr/yr	1
Sex change rate rate rate rate	0		1
Activity level change rate rate rate rate	0		1
Energy intake change rate rate rate rate	0	kcal/day/yr/yr/yr/yr	1
Energy expenditure change rate rate rate rate	0	kcal/day/yr/yr/yr/yr	1
Energy balance change rate rate rate rate	0	kcal/day/yr/yr/yr/yr	1
Weight change rate rate rate rate rate	0	kg/yr/yr/yr/yr/yr	1
Height change rate rate rate rate rate	0	m/yr/yr/yr/yr/yr	1
Sex change rate rate rate rate rate	0		1
Activity level change rate rate rate rate rate	0		1
Energy intake change rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr	1
Energy expenditure change rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr	1
Energy balance change rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr	1
Weight change rate rate rate rate rate rate	0	kg/yr/yr/yr/yr/yr/yr	1
Height change rate rate rate rate rate rate	0	m/yr/yr/yr/yr/yr/yr	1
Sex change rate rate rate rate rate rate	0		1
Activity level change rate rate rate rate rate rate	0		1
Energy intake change rate rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr/yr	1
Energy expenditure change rate rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr/yr	1
Energy balance change rate rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr/yr	1
Weight change rate rate rate rate rate rate rate	0	kg/yr/yr/yr/yr/yr/yr/yr	1
Height change rate rate rate rate rate rate rate	0	m/yr/yr/yr/yr/yr/yr/yr	1
Sex change rate rate rate rate rate rate rate	0		1
Activity level change rate rate rate rate rate rate rate	0		1
Energy intake change rate rate rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr/yr/yr	1
Energy expenditure change rate rate rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr/yr/yr	1
Energy balance change rate rate rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr/yr/yr	1
Weight change rate rate rate rate rate rate rate rate	0	kg/yr/yr/yr/yr/yr/yr/yr/yr	1
Height change rate rate rate rate rate rate rate rate	0	m/yr/yr/yr/yr/yr/yr/yr/yr	1
Sex change rate rate rate rate rate rate rate rate	0		1
Activity level change rate rate rate rate rate rate rate rate	0		1
Energy intake change rate rate rate rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr/yr/yr/yr	1
Energy expenditure change rate rate rate rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr/yr/yr/yr	1
Energy balance change rate rate rate rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr/yr/yr/yr	1
Weight change rate rate rate rate rate rate rate rate rate	0	kg/yr/yr/yr/yr/yr/yr/yr/yr/yr	1
Height change rate rate rate rate rate rate rate rate rate	0	m/yr/yr/yr/yr/yr/yr/yr/yr/yr	1
Sex change rate rate rate rate rate rate rate rate rate	0		1
Activity level change rate rate rate rate rate rate rate rate rate	0		1
Energy intake change rate rate rate rate rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr/yr/yr/yr/yr	1
Energy expenditure change rate rate rate rate rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr/yr/yr/yr/yr	1
Energy balance change rate rate rate rate rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr/yr/yr/yr/yr	1
Weight change rate rate rate rate rate rate rate rate rate rate	0	kg/yr/yr/yr/yr/yr/yr/yr/yr/yr/yr	1
Height change rate rate rate rate rate rate rate rate rate rate	0	m/yr/yr/yr/yr/yr/yr/yr/yr/yr/yr	1
Sex change rate rate rate rate rate rate rate rate rate rate	0		1
Activity level change rate rate rate rate rate rate rate rate rate rate	0		1
Energy intake change rate rate rate rate rate rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr/yr/yr/yr/yr/yr	1
Energy expenditure change rate rate rate rate rate rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr/yr/yr/yr/yr/yr	1
Energy balance change rate rate rate rate rate rate rate rate rate rate	0	kcal/day/yr/yr/yr/yr/yr/yr/yr/yr/yr/yr	1
Weight change rate rate rate rate rate rate rate rate rate rate rate			

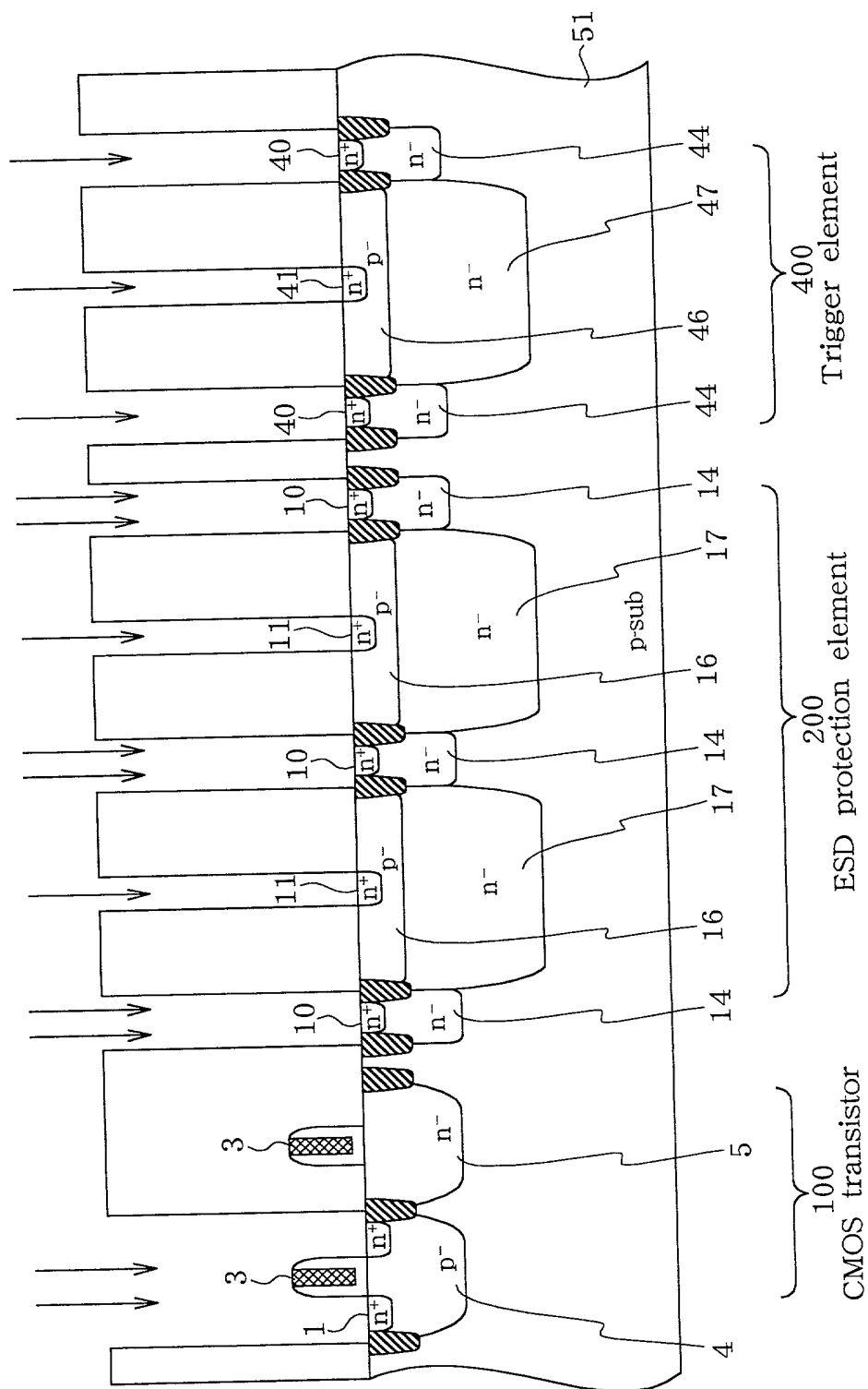


FIG. 21

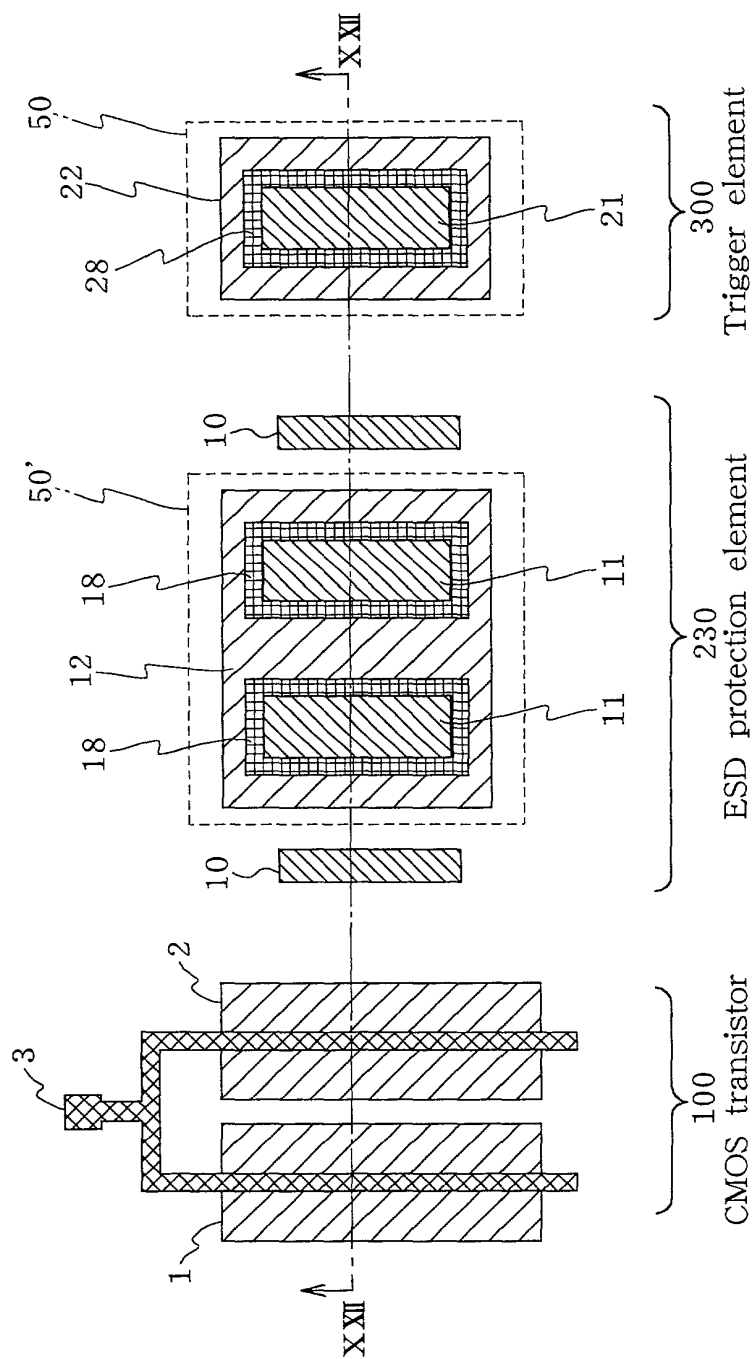


FIG. 22

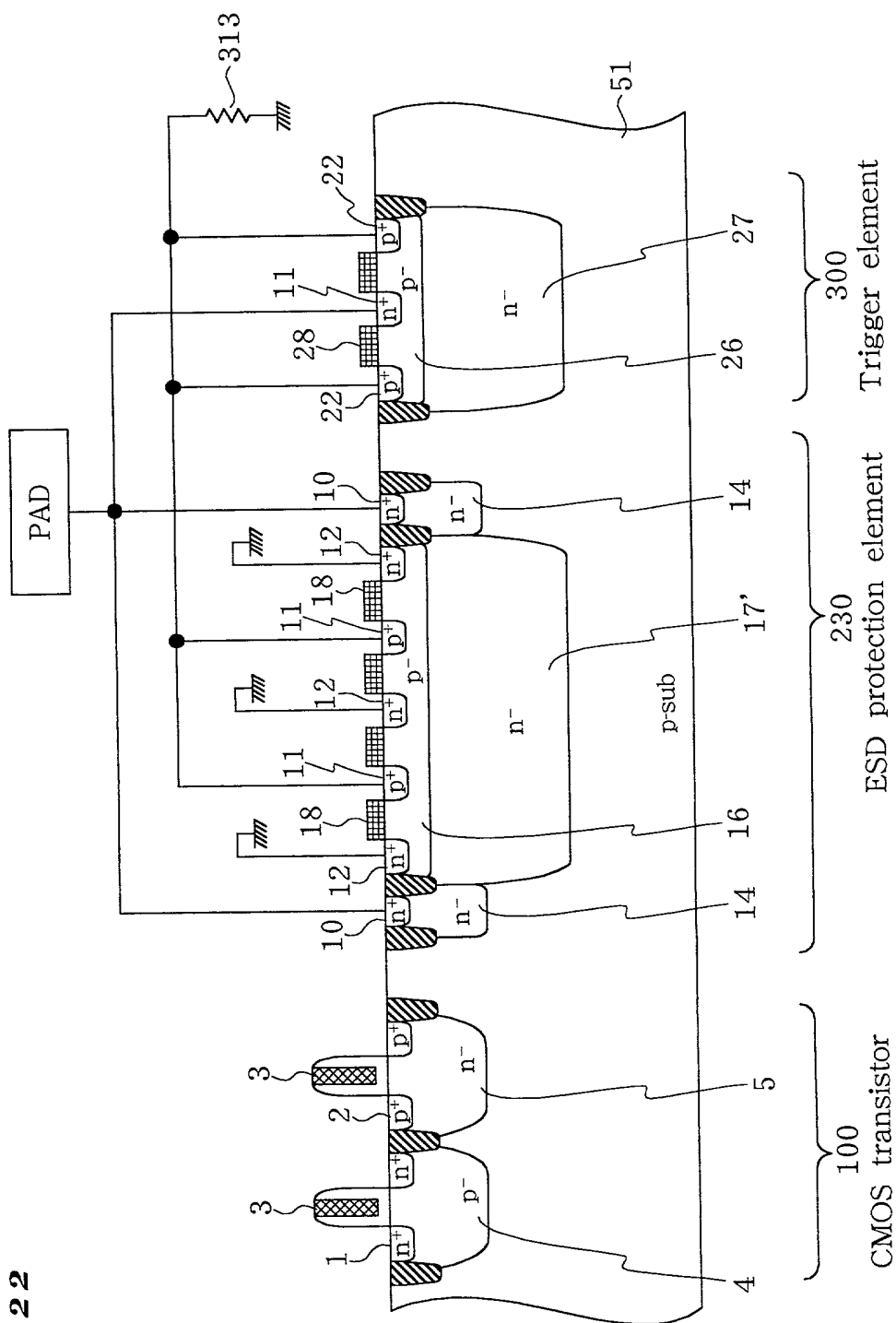


FIG. 23

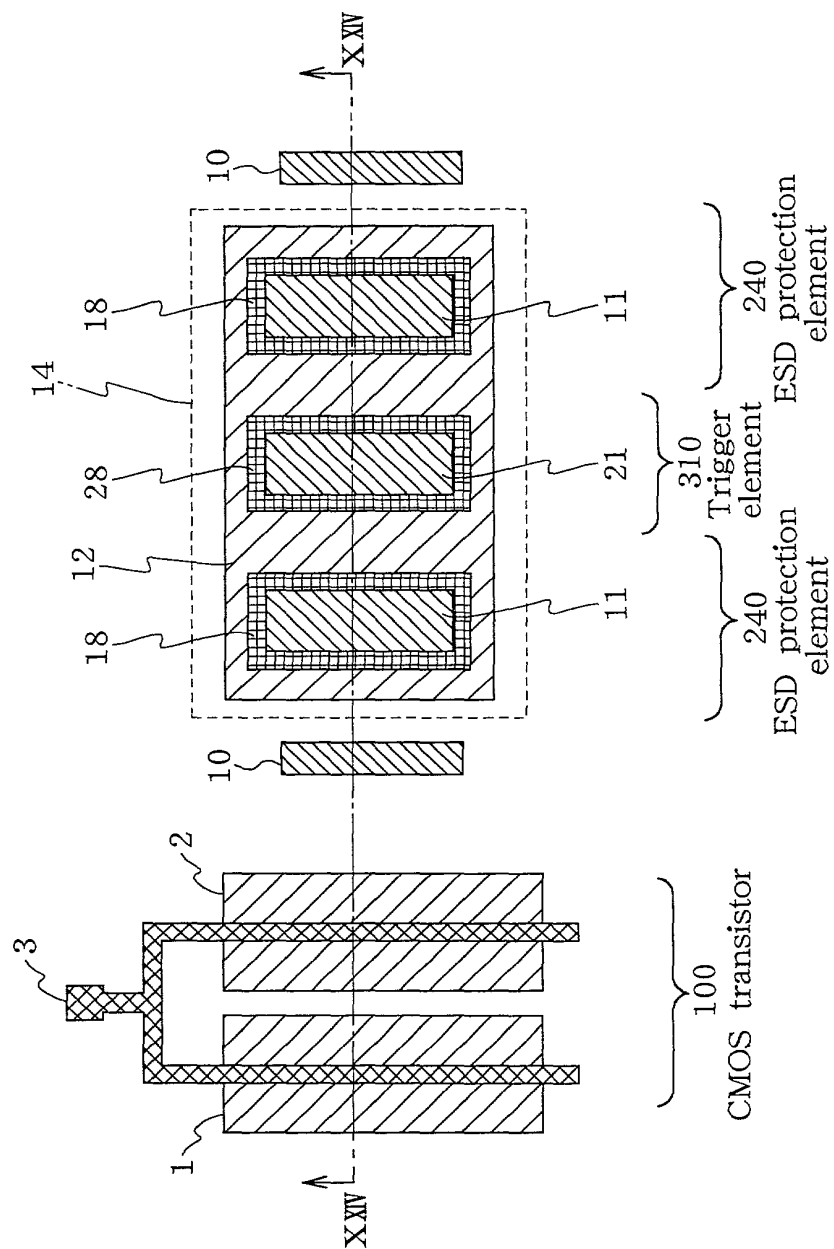
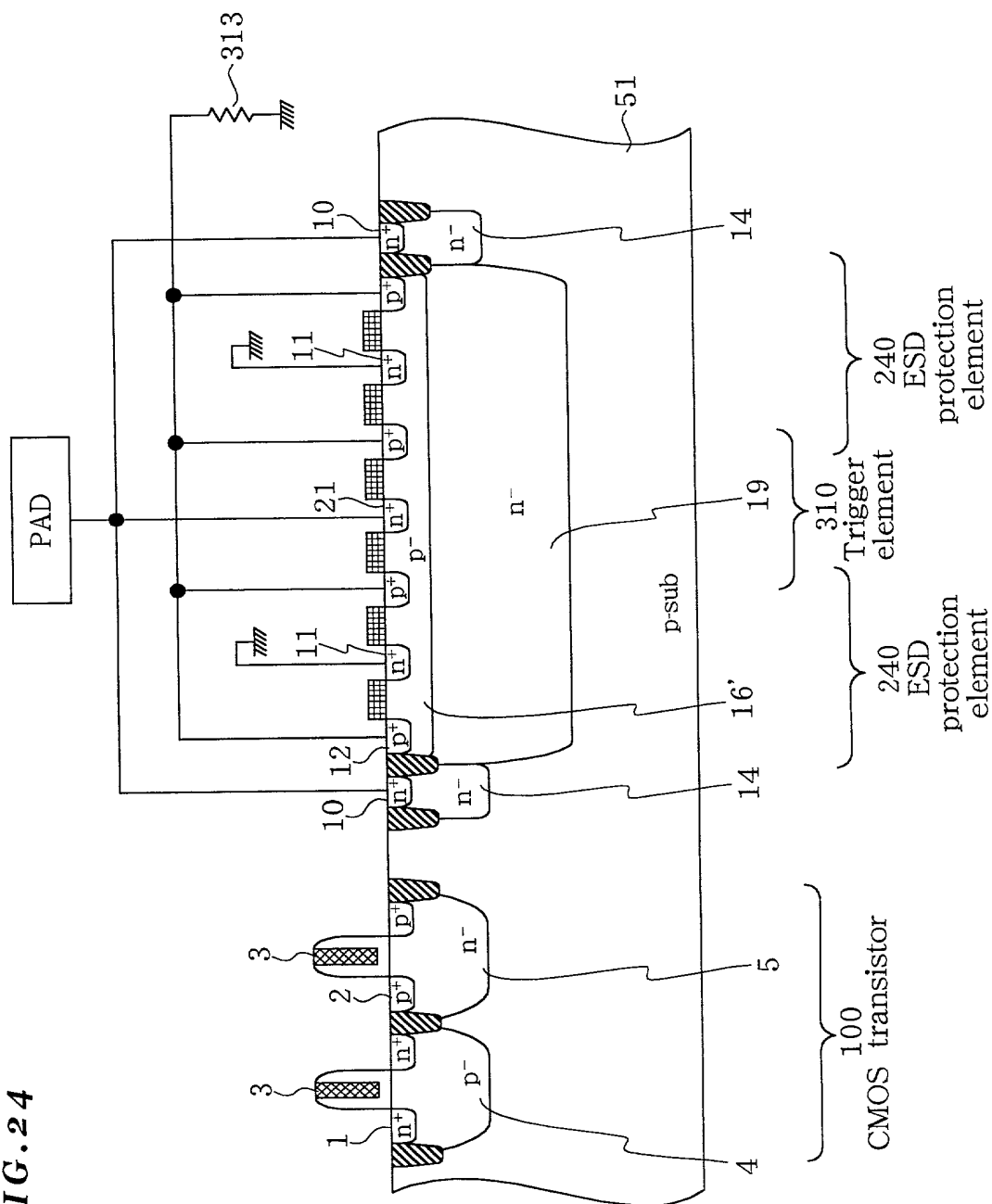


FIG. 24



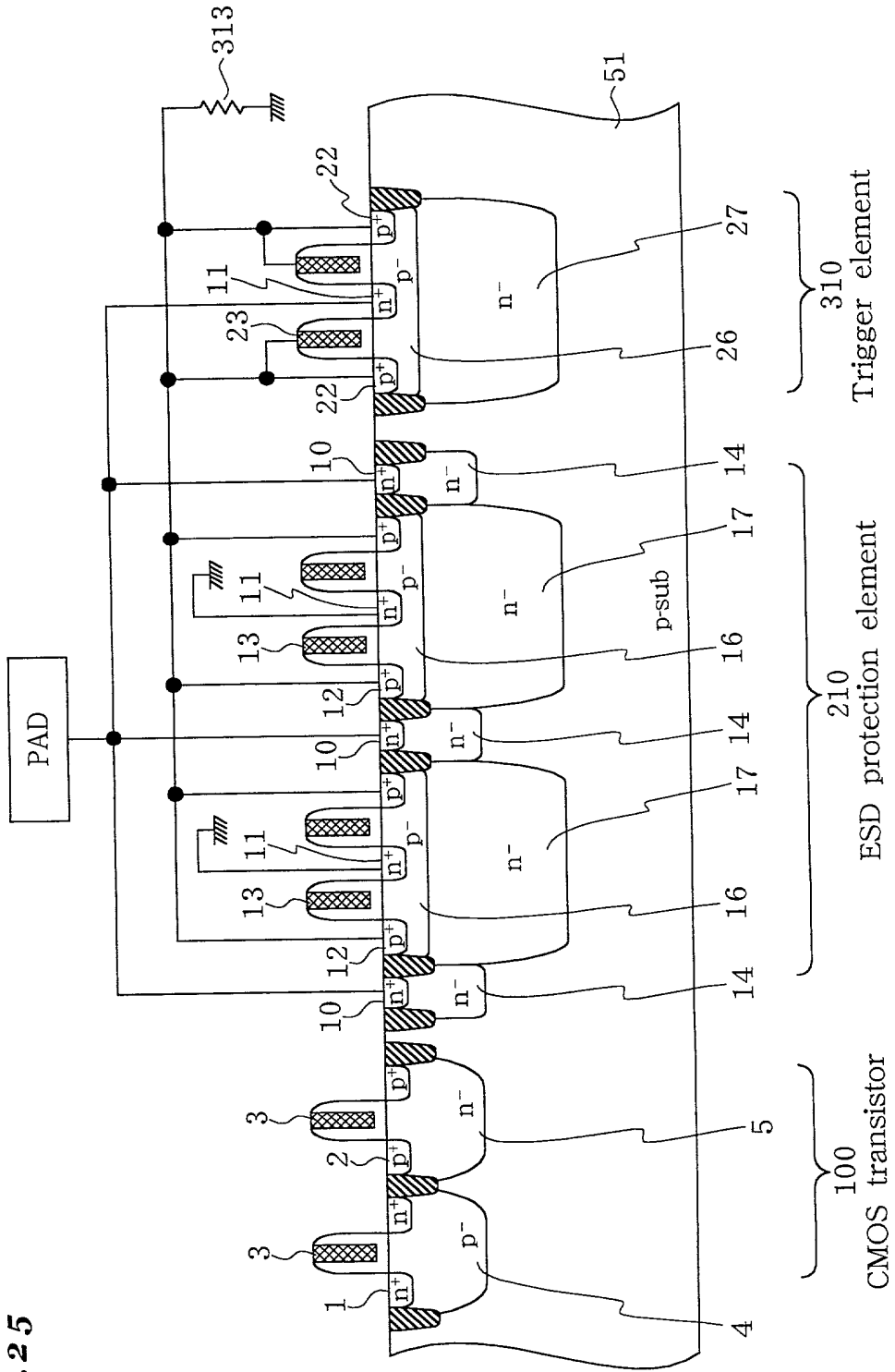


FIG.25

FIG. 25 is a cross-sectional view of the semiconductor device according to the first embodiment of the present invention.

FIG. 26

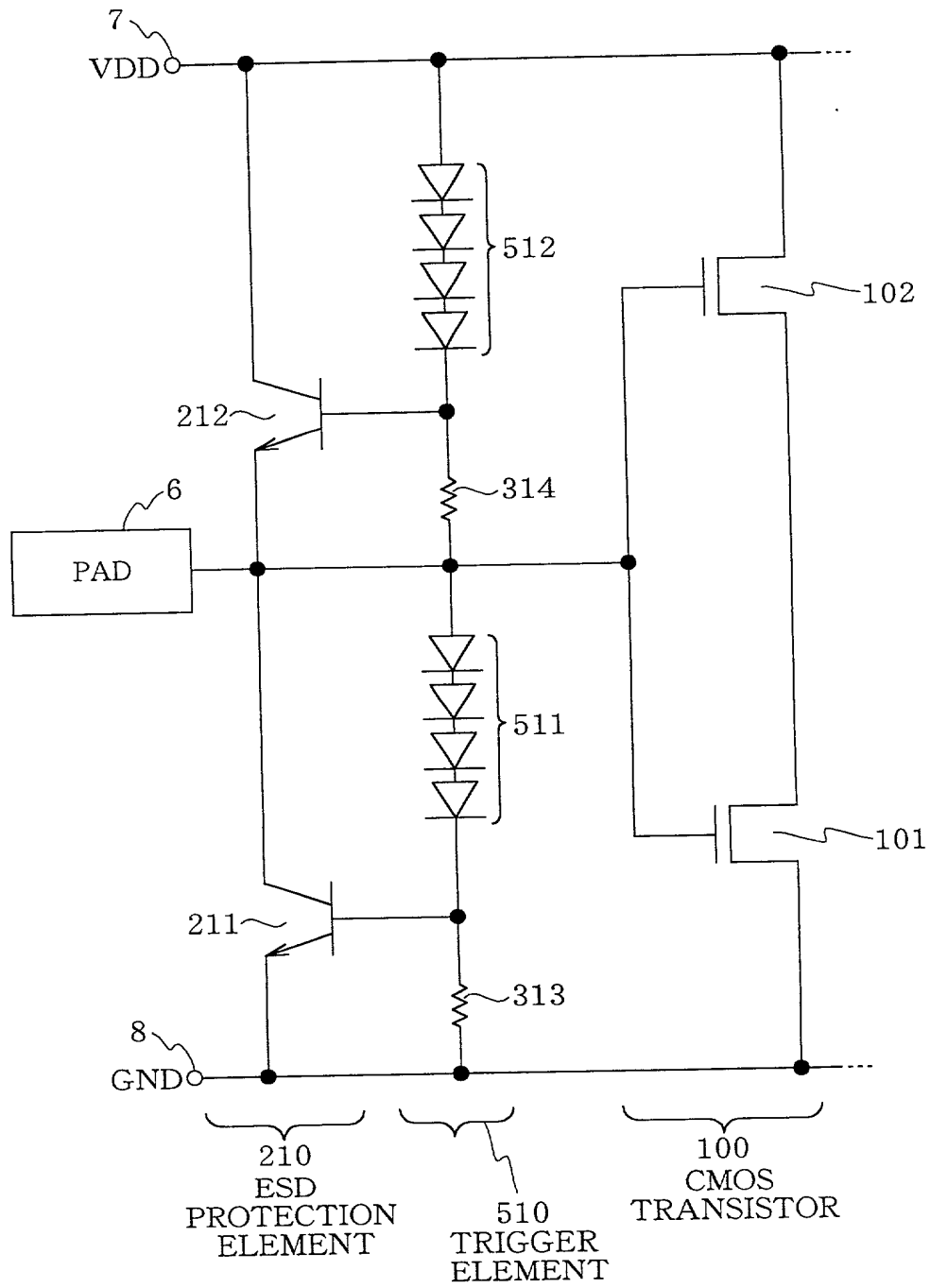
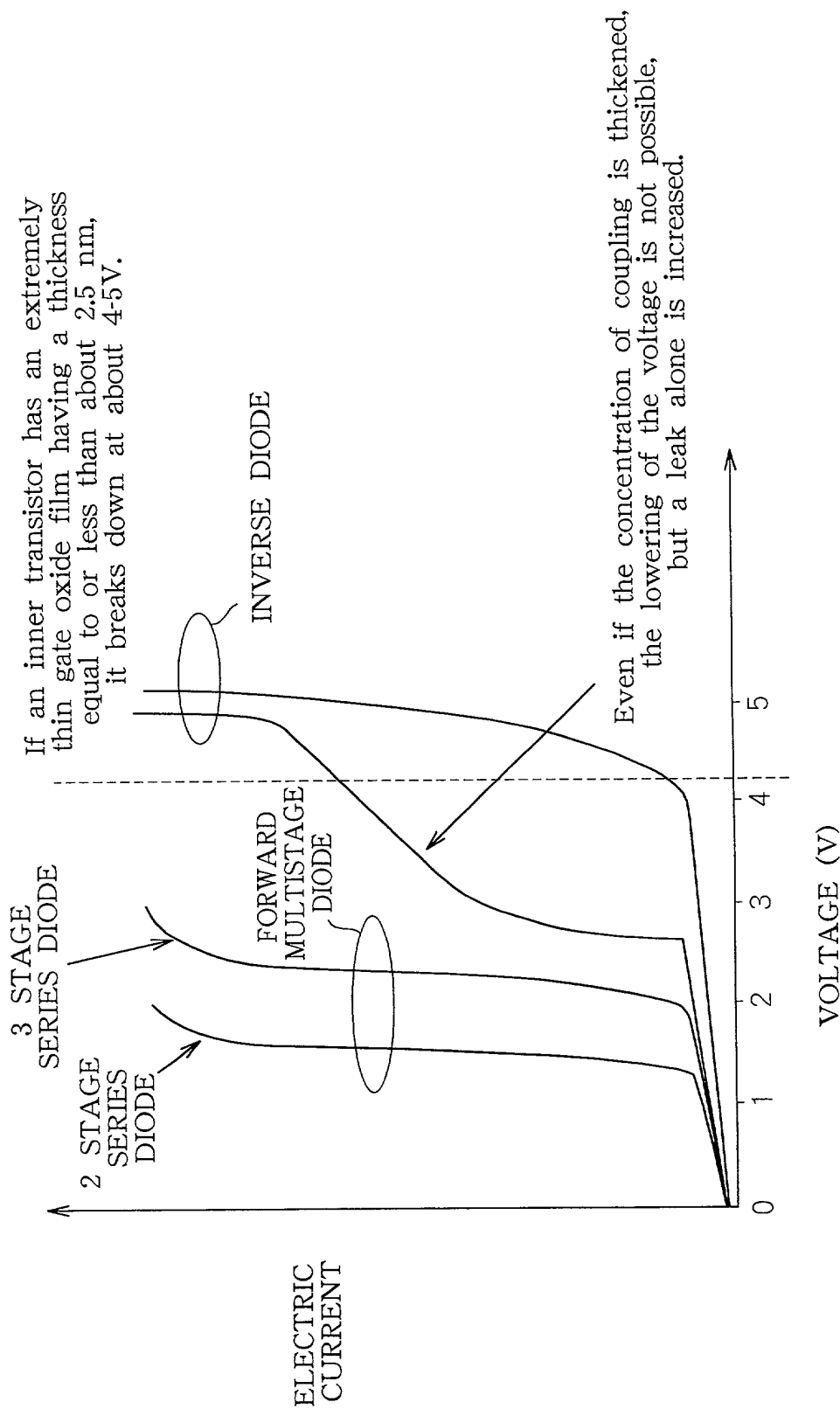


FIG. 28

COMPARISON OF FORWARD SERIES CONNECTION DIODE AND INVERSE DIODE



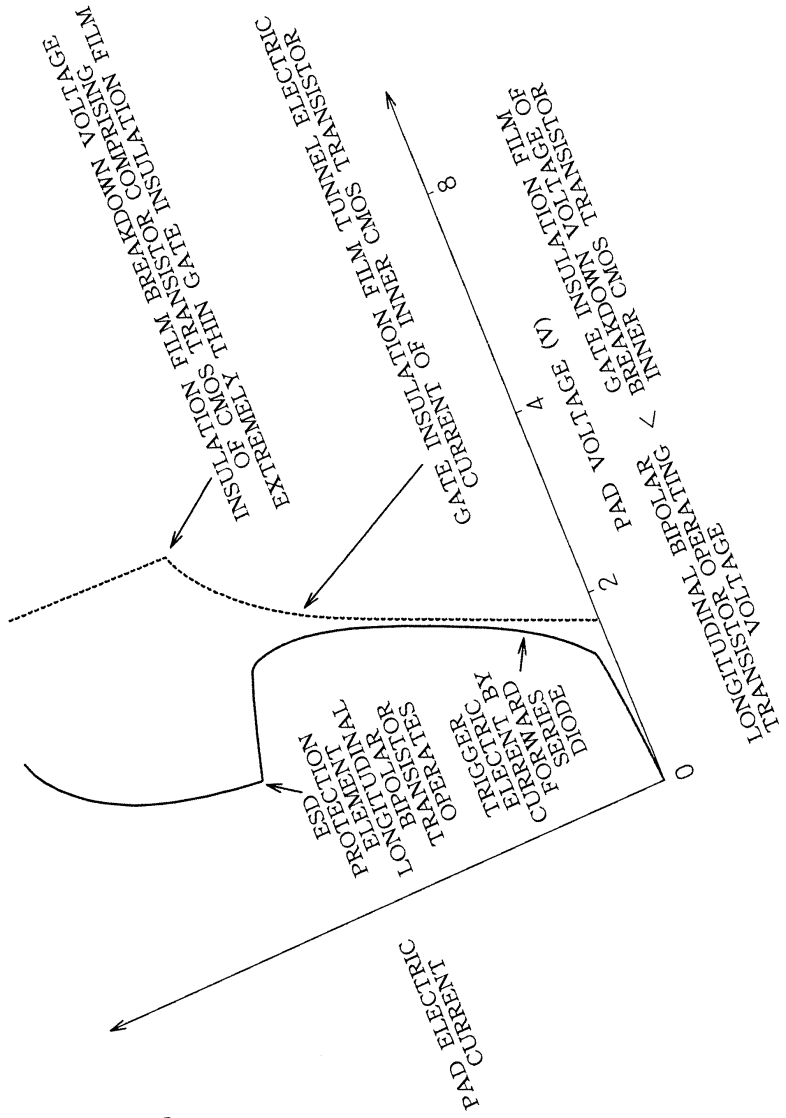


FIG. 29

FIG.30

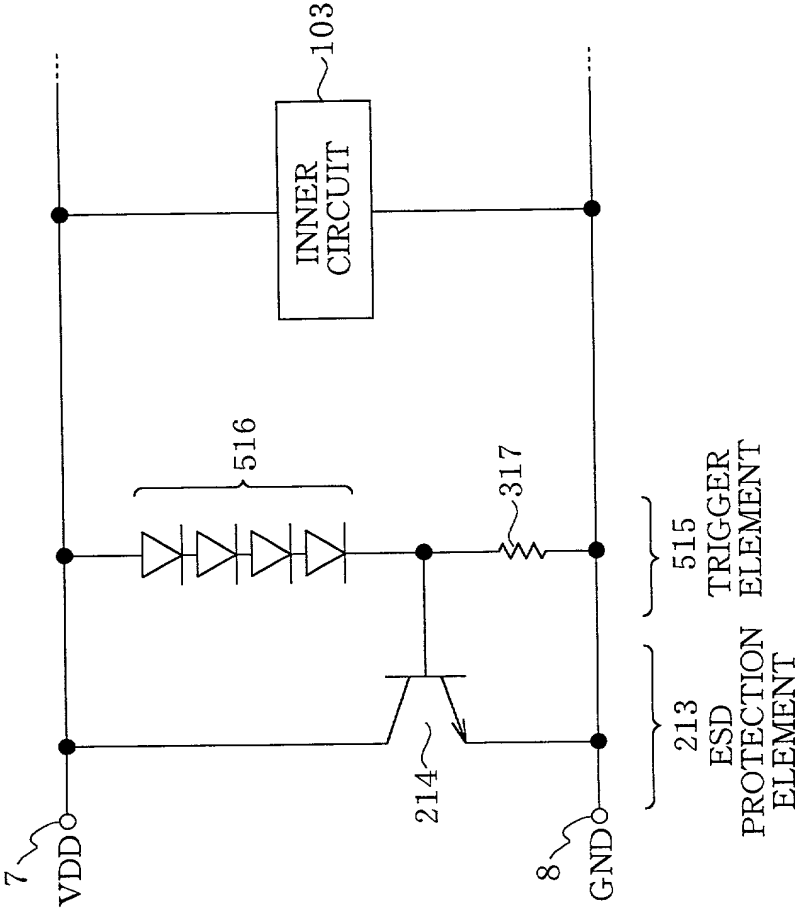


FIG. 32(a)

DIODE COMPRISING
p-LAYER/ n well
FABRICATED BY
EXISTING CMOS PROCESS

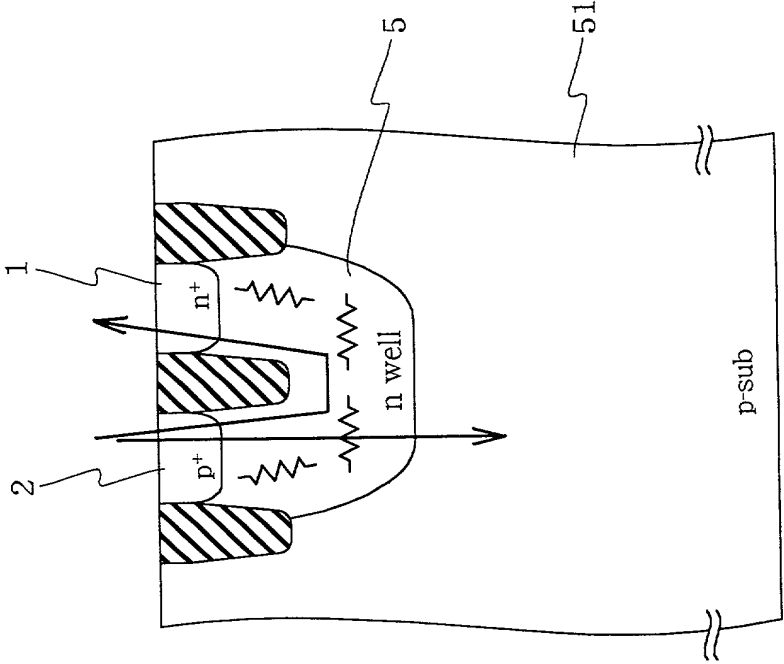


FIG. 32(b)

DIODE UTILIZING ONE PORTION
OF LONGITUDINAL
BIPOLAR TRANSISTOR

